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U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

and

STATE OF MONTANA

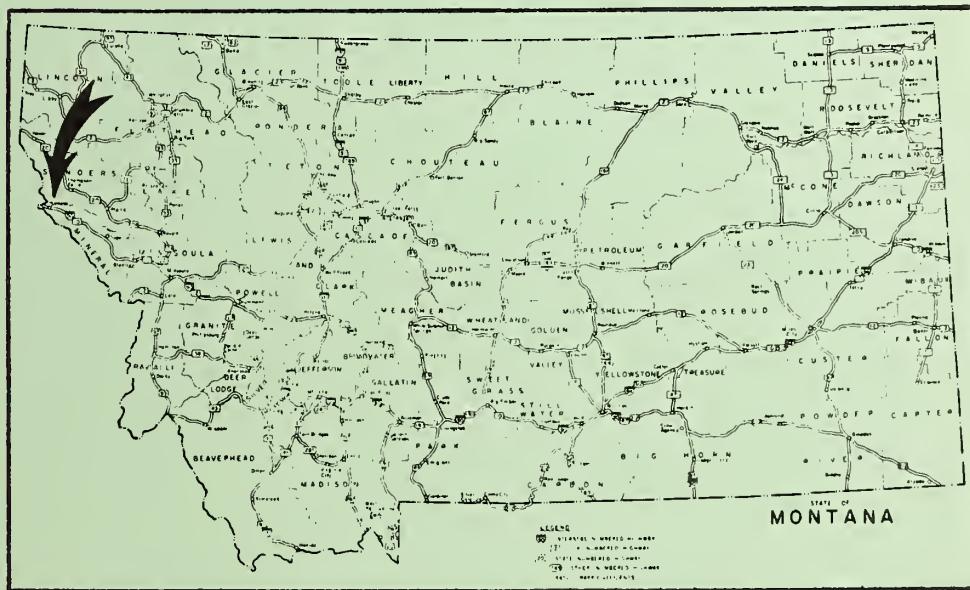
DEPARTMENT OF HIGHWAYS

DRAFT
ENVIRONMENTAL STATEMENTADMINISTRATIVE ACTION
FOR

PROJECTS S-221 (3) and S-221 (7)

THOMPSON FALLS - WEST

(Prospect Creek from Glidden Gulch to Daisy Creek)



This highway improvement is proposed for funding under Title 23, United States Code. This statement, for the improvement, was developed in consultation with the Federal Highway Administration and is submitted pursuant to 42 U.S.C. 4332(2)(c).

H. J. ANDERSON, DIRECTOR OF HIGHWAYS

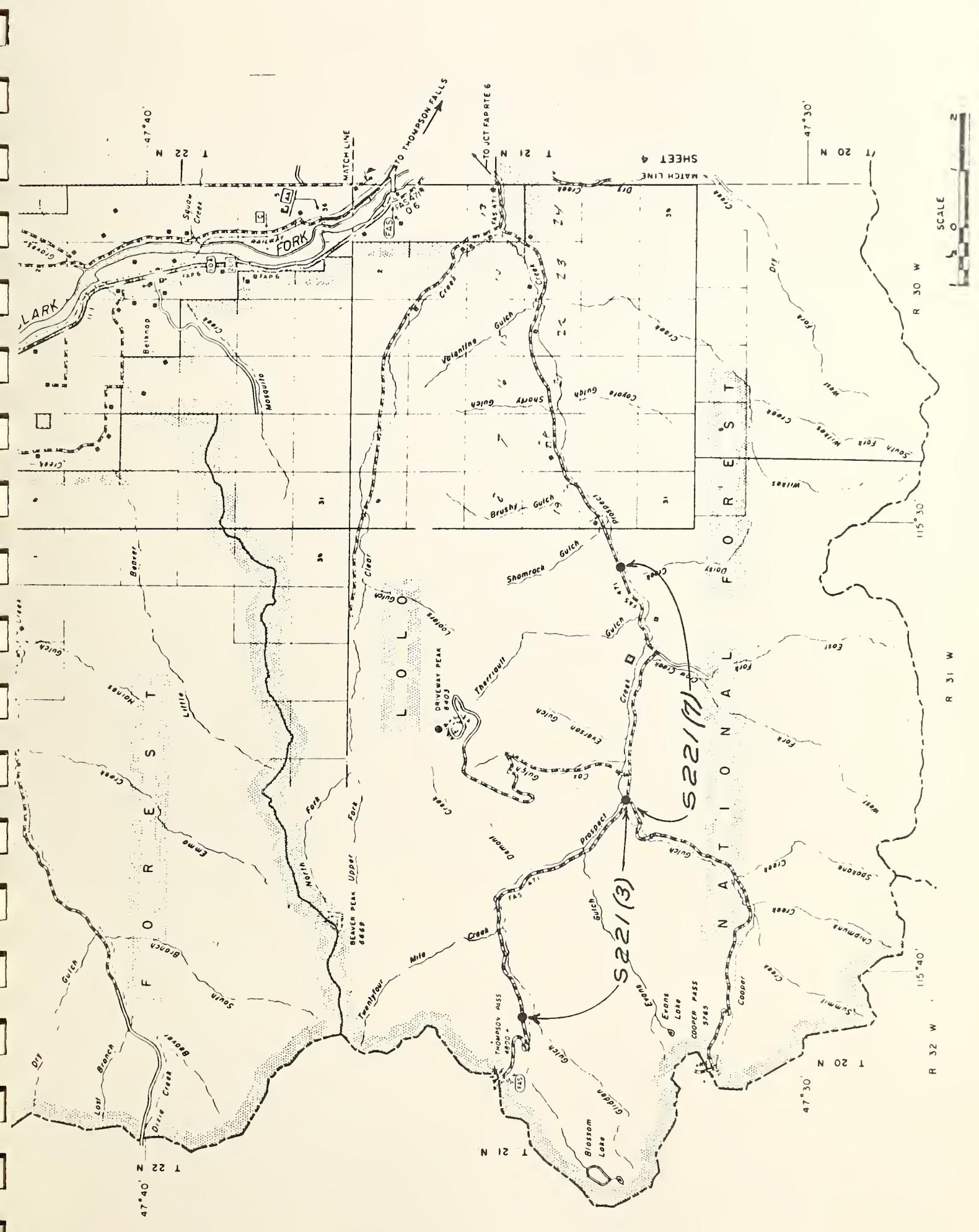
7/18/73
Date
By Jark R. Baskett
Administrator, Engineering Division

APPROVED AND ADOPTED BY:

7/4/73
Date

H. C. Stewart
Federal Highway Administration
Division Engineer





INTRODUCTION

The purpose of this statement is to assure that the human environment is carefully considered and that state and national environmental goals are met when developing highway improvements.

Preparation of this Draft Environmental Statement was entrusted to the State of Montana, Department of Highways. Data compiled by the following agencies is presented throughout this statement.

State of Montana - Department of Highways

Sanders County - Board of County Commissioners

United States Forest Service - Thompson Falls

Ranger District

State of Montana - Department of Fish and Game

Federal Highway Administration

In past years, representatives of these agencies have held meetings concerning the projects to be discussed in this statement. At the most recent meeting held in Thompson Falls, September 19, 1972, these agencies concluded that this statement should be prepared with the Department of Highways being the lead agency. The consultation and coordination furnished by the before-mentioned agencies has been of great benefit in the preparation of this statement.



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SUMMARY SHEET

I. TYPE OF ACTION

(X) Administrative () Legislative
(X) Draft () Final
(X) Environmental Statement
() Combination Environmental/Section 4(f) Statement

II. PROJECT DESCRIPTION

These projects are a part of Federal Aid Secondary (F.A.S.) Route No. 471, also known as Forest Highway (FH) No. 7. This route begins at a point on F.A.P. Route No. 6, Montana 200, about two miles west of Thompson Falls. The route proceeds westerly to a point on the Montana-Idaho state line at Thompson Pass. The length of this route is approximately 23 miles.

The proposed projects begin at a point on F.A.S. 471, approximately 20 miles west of Thompson Falls.

Project S-221 (3) begins just east of the confluence of Glidden Gulch and Prospect Creek and runs easterly to the confluence of Cooper Gulch and Prospect Creek, a distance of 4.5+ miles. Project S-221 (7) begins at the end of S-221 (3) and continues easterly to the confluence of Daisy Creek with Prospect Creek, a distance of 4.0+ miles. Exhibits "A" and "B" show the location of the projects.

The projects will basically follow the existing road through this area. The projects will be designed using a typical section having a future finish top of 28 feet. This section will have 2-12 foot driving lanes and 2-foot outside shoulders.

III. ENVIRONMENTAL IMPACTS

The long lasting impact of this project should be beneficial in nature as it will provide a fast, safe, and efficient transportation facility. There will be some adverse environmental impact on the area which will be discussed in detail in this statement, but this will not

be enough to significantly alter the character of the area.

New right-of-way will have to be acquired to provide adequate land for the new facilities. At the present stage of development of the project, it is not known exactly what amount of right-of-way will be required for the entire project; however, a minimum of 60 feet on each side of centerline is normal for secondary projects.

Clearing for the project will be limited to five feet outside the construction limits and much of this cleared land will be top-soiled and reseeded and generally restored to its former state.

There will be some increase in noise, air, and water pollution during construction of the projects, although these items should return to their present levels upon completion.

Over the long-term, noise and air pollution may increase due to the increase in traffic that is expected on this highway in the future. There presently exists through the area of these projects a pipeline owned by Yellowstone Pipeline Company. There will be areas where relocation and/or encasement of this pipe could be required. The relocation of this pipe would be conducted in a manner which would not create a detrimental impact. It should be possible to relocate the pipe just outside and parallel to the shoulder line of the roadway if relocation is required.

Section 4(f) of the Department of Transportation Act of 1966 requires that special consideration be given to lands used as parks, recreation areas, wildlife or waterfowl refuges, or natural or historic landmarks. Requests for Section 4(f) determinations were sent to the U. S. Forest Service and the Montana Department of Fish and Game.

Their determinations show that there is no Section 4(f) involvement.

The requests and replies are included in Section X of the Draft Environmental Statement.

IV. ALTERNATIVES

Reasonable alternate routes through this area are very limited due to a narrow valley floor and steep mountain slopes to the sides. The projects will parallel and/or overlay the existing road and avoid encroachments to the stream wherever possible. If encroachment becomes necessary, the design will be developed to minimize the impacts created.

The "do-nothing" alternate has been given some consideration, but this would not fulfill the basic responsibility of providing safer and more efficient transportation facilities for the traveling public.

V. FEDERAL, STATE, AND LOCAL AGENCIES AND OTHER ORGANIZATIONS FROM WHICH COMMENTS WERE REQUESTED

1. Assistant Secretary - Program Policy
Attention: Director, Environmental Project Review
Department of the Interior
Washington, D.C. 20240 (9 copies)
2. Director, Department of Natural Resources
and Conservation
Sam W. Mitchell Building
Helena, Montana 59601
Attention: Lawrence M. Jakub
3. Fletcher E. Newby, Executive Director
Environmental Quality Council
Capitol Station
Helena, Montana 59601 (2 copies)
4. Department of Planning and Economic
Development
Capitol Station
Helena, Montana 59601
5. Environmental Protection Agency
Room 916, Lincoln Tower
1860 Lincoln Street
Denver, Colorado 80203 (5 copies)

6. U. S. Forest Service
Region 1
Federal Building
Missoula, Montana 59801 (5 copies)
7. Department of the Army
Seattle District
Corps of Engineers
1519 Alaskan Way South
Seattle, Washington 98134
8. U. S. Coast Guard Commander
Thirteenth Coast Guard District
618 Second Avenue
Seattle, Washington 98124
9. Director
Department of Fish and Game
Sam W. Mitchell Building
Helena, Montana 59601
10. Board of County Commissioners
Sanders County Courthouse
Thompson Falls, Montana 59873
11. Governor's Office
Capitol Station
Helena, Montana 59601
12. Postmaster
Thompson Falls, Montana 59873
13. Department of Health, Education and Welfare
9017 Federal Office Building
19th and Stout Streets
Denver, Colorado 80202
14. Student Environmental Research Center
University of Montana
Room 212, Venture Center
Missoula, Montana 59801
15. Mayor
City of Thompson Falls
Thompson Falls, Montana 59873
16. School Board
Thompson Falls, Montana 59873
17. Documents Department
Montana State Library
930 East Lyndale
Helena, Montana 59601 (20 copies)
18. Dr. T. C. Byerly
Office of Secretary of Agriculture
Washington, D.C. 98109

19. Idaho Department of Highways
E. L. Mathes, State Highway Engineer
3211 State Street
P.O. Box 7129
Boise, Idaho 83707
20. Montana Bureau of Mines and Geology
College of Mineral Science and Technology
Butte, Montana 59701
21. Board of County Commissioners
Shoshone County
Wallace, Idaho

VI. DATE DRAFT STATEMENT MADE AVAILABLE TO CEQ

August 20, 1973

DRAFT
ENVIRONMENTAL STATEMENT

I. PURPOSE OF THE PROJECT

These projects, S-221 (3) and S-221 (7), Thompson Falls-West, involve the construction of an 8.5+ mile section of F.A.S. Route No. 471. The projects follow the Prospect Creek drainage from Glidden Gulch on the west to Daisy Creek on the east.

The projects are to upgrade that portion of F.A.S. 471 which is not complete. Presently this route has been upgraded from Montana 200 westerly about eleven (11) miles and from the Idaho line easterly for 3.5+ miles.

In the 1950's various groups of people living in Thompson Falls, Montana, and Murray and Prichard, Idaho, worked together for betterment of this route. Both states now have this route included in their secondary road system.

II. DESCRIPTION OF THE PROPOSED PROJECTS AND THEIR SURROUNDINGS

A. Project Description

These projects are located in northwestern Montana in the southwestern part of Sanders County. They involve the reconstruction of an 8.5+ mile section of F.A.S. No. 471.

The Lolo National Forest encompasses much of the surrounding area. This provides an abundance of public land. There are several developed and undeveloped campgrounds and recreation areas along Montana 200 with public fishing, swimming, and boating facilities available around the lakes created by the Cabinet Gorge, Noxon Rapids, and Thompson Falls Dams on the Clark Fork River. There are no developed campgrounds along

Prospect Creek. The area does experience some camping and picnicing at undeveloped sites along the route.

One site that shows evidence of camping and picnicing activity is near a locally recognized historical site known as the Old Mountain House. This site is discussed further in Section III of this report.

A map showing the relationship of these projects to the surrounding area is included in the exhibit section of this statement.

Federal Aid Secondary Route 471 begins at Thompson Pass on the Montana-Idaho border and extends easterly 23+ miles to a point on Montana 200 about two miles west of Thompson Falls. The route follows an existing low class roadway down the Prospect Creek drainage.

From the pass easterly for 3.5+ miles, the route is presently under contract for reconstruction to secondary standards. Project S-221 (3) begins 3.5+ miles east of the pass and extends 4.5+ miles easterly to Cooper Gulch. Project S-221 (7) begins at this point and extends easterly 4.0+ miles to Daisy Creek. The remaining 11.0+ miles of the route was constructed to secondary standards in the early 1960's. The reconstructed sections are presently gravel surfaced; however, provision has been made for future asphalt surfacing.

The project will be designed using a typical section having a future finish top of 28 feet. This will provide 2-12 foot driving lanes with 2-foot shoulders. The present finished surface will have a width of approximately 35 feet and will have compacted crushed aggregate surfacing.

The alignment for these projects will parallel or overlay the existing road wherever feasible. The alignment will miss the existing structures which cross the drainages in the project so that these structures can be used as detours during construction. Upon completion of the project, the existing structures will be removed.

Several bridges and/or large pipes will be needed on the projects. The proposed alignment crosses Prospect Creek at a point approximately $1.5+$ mile east of the beginning of Project S-221 (3). A crossing of Evans Creek is also included in Project S-221 (3). On project S-221 (7), it will be necessary to cross Cooper's Creek, Crow Creek, and Prospect Creek. The Prospect Creek crossing would be just east of Crow Creek. The decision to use structures, pipes, or a combination of these will be based on hydraulic and hydrologic study of the streams involved.

The present average daily traffic on the existing road is approximately 52 vehicles per day. The design year (1994) count is expected to be approximately 130 vehicles per day.

New right-of-way will be acquired to provide adequate land for the new facilities. The minimum width normally taken is 60 feet on each side of centerline. This width will be increased where construction requirements dictate. The land involved in these projects is U. S. Forest Service land, with the exception of one mining claim at Station $294+70+$ on Project S-221 (3), and three patented mining claims located between Stations $541+00+$ and Station $560+00+$ on Project S-221 (7).

Acquisition of the U. S. Forest Service land will be by permanent easement and for the mining claims, fee simple on surface rights.

B. Project History and Current Status

The preliminary engineering programs for these projects were approved in December, 1962, for Project S-221 (3), and in November, 1969, for Project S-221 (7). The S-221 (3) project was originally part of the project now under construction from the Idaho line easterly for 3.5± miles. However, due to a conflict at about Station 151+00± to Station 175+00± over whether or not encroachment into the stream would be allowed, only the 3.5± mile section was contracted.

Design alternates have been prepared in an attempt to minimize the damage to this area at a reasonable cost. Project S-221 (7) is currently in design status. This project appears to be free of any serious controversy.

C. Description of Existing Environment

1. Land Use

The Prospect Creek area has been used primarily for timber harvesting and mining activities. A limited amount of recreational activity also exists. With the development of this route, the land use will remain essentially the same. The added traffic between Thompson Falls, Montana, and Murray and Prichard, Idaho, will not affect land use patterns.

The majority of the area tributary to the proposed highway is well timbered and within the General Forest Zone. Much of the area was burned over in major fires of 1889 and 1910, creating young stands of lodgepole pine, Douglas fir, and larch with a scattered overstory of mature timber. Harvest cuts of the mature and over-mature trees are planned for the Therriault, Lucky Boy, Buster Brown, Cox Gulch, and Evans Gulch drainages in the next ten years. Additional timber management activities should occur as the 60-70 year old trees reach harvestable size and age.

U. S. Antimony Corporation is presently processing 100 tons/day of ore from their mining properties in Antimony Creek. The mine and mill operations presently employ 20 individuals.

Much of the upper Prospect Creek area is mineralized to some extent. Numerous claims have been staked during the past ten years. The last two years have seen increased exploration activities. Good access to upper Prospect Creek could stimulate increased exploration and possible development of additional mineral properties.

2. Terrain

The projects are located in the mountains of north-western Montana. They are within the boundaries of the Lolo National Forest and about 20 miles west of Thompson Falls. The surrounding mountains are part of the Bitterroot Mountain Range. The Prospect Creek drainage contains open meadows in its lower reaches and timber covered ridges at higher elevations. There are no lakes of any size in the area.

3. Geology

The outcrops in this area are of the Pre-Cambrian Prichard formation, which consists of layers of quartzite and quartzitic argillite. The fairly wide and level valley floor of Prospect Creek consists of a thin soil profile covering stream gravels. Some sand and silt layers may be present in the gravels. On the upper half of S-221 (3), the alignment traverses talus slopes at several locations. The talus is blocky, large, and contains only minor amounts of fine material. Most of these slopes are active and appear to be only temporarily stable in their natural slopes. Cuts and fills then will present some difficult problems in design. Retaining structures may be necessary both above and below the roadway to avoid major talus slides.

4. Climate

The average temperature in this area is about 45°. The temperature normally varies from an average of about 70°F. in July to an average of about 20°F. in January.

The average annual precipitation in this area is approximately 26 inches at Thompson Falls, 70 inches at Thompson Pass, and approximately 40-50 inches on the projects, mostly in the form of snowfall. Considering that approximately 70 percent of this moisture is snow and that on an average 3 inches of snow equals 1 inch of precipitation, there would be approximately 120" of snow depth in the area during the winter months. This accumulation of snow would normally occur between October and April. The prevailing wind in this area is westerly to west southwesterly.

5. Population

The present population of Thompson Falls, according to the 1970 census, is 1,356 people.

The road to these projects is kept open the year around as far west as Station 385+00 on S-221 (7) from Thompson Falls, because of the antimony mine located near that station. This mine employs approximately 20 persons who generally commute from Thompson Falls. There are no permanent residents on the projects, so there are no mail routes, school bus routes, or irrigation systems.

There has been no land development on this projects.

No wide band ownership maps are included with this report, as the projects are entirely on U. S. Forest Service land, with the exception of the mining claims described previously. This is also an unsurveyed township and range area.

6. Economic Activity

These projects should have no adverse effect on the economic activity of the area. Instead, it should be beneficial because of the improved access to the area. Also, there will probably be an increase in economic activity in the area due to the activity brought about while the projects are under construction.

7. Fish and Wildlife

Elk, mule deer, white-tailed deer, and black bear are the most numerous big game species inhabiting the Prospect Creek drainage. Occasional moose, and mountain lions, are also present.

Elk, deer, and black bear can be found in most of the drainage during the summer months. During the winter and

early spring, the drainage is important as a winter range for elk and mule deer at the optimum elevations on south and west facing slopes from Clear Creek to the vicinity of Twenty-Four Mile Creek. White-tails use the lowest elevations from the mouth of the drainage for the first few miles during the winter.

In addition to big game, three species of mountain grouse are present along with snowshoe hares, furbearers, bobcats, coyotes, and some waterfowl.

The highway, no doubt, will be crossed by migrating big game from the numerous drainages on the south and southwest area of the main Prospect drainage in the winter and then again in the summer going back to summer ranges.

A highway would no doubt create a hazard for game crossing the highway at all times of the year. This could be especially true during the winter for white-tailed deer, which winter at the lowest elevations. White-tailed deer vehicle collisions are numerous throughout a region where a highway bisects or borders a winter range. These collisions are most prevalent during the crepuscular or nocturnal hours. A year-around road would increase mortality.

In areas of known high game movements, the roadway could be signed to forewarn the motorist and to help minimize collisions and game mortality.

Most of Prospect Creek in the project area dries up at times during the summer months. Even though this negates the recreation potential for fishing at this time of year, the entire stream is important during the early spring and summer months when the fish

migrate to and from upper Prospect Creek which supports a natural fishery. Any activity which changes or confines the stream cross-section has detrimental effects to the flood plain. This is clearly evidenced in Lower Prospect Creek.

A wide variety of species of the family Salmonidae inhabit Prospect Creek and its tributary streams. These include cutthroat trout, rainbow trout, Dolly Varden, brook trout, brown trout, and mountain whitefish. Catchable size rainbow trout are stocked in the lower end of Prospect Creek to supplement wild trout populations. Historically, this stream was used extensively by spawning populations of Dolly Varden trout migrating from Lake Pend Oreille. With the advent of Cabinet Gorge and Noxon hydroelectric dams, this run was all but eliminated. In recent years, an attempt was made to increase migratory brown trout spawning runs by planting eyed eggs in an incubation channel draining into the lower portion of Prospect Creek. After several years of evaluation of imprint egg plants, no discernable increase in migratory brown trout populations has been identified to date.

Qualitative measurements of the trout populations were conducted with electrofishing gear in 1970 to determine species composition and relative abundance. Dolly Varden and cutthroat trout were the only species collected from the upper portion of the creek in the Twenty-Four Mile Creek area. Below Gilbert Gulch, a variety of species were collected with brook trout and rainbow trout being the most abundant.

The number of game fish collected varied considerably throughout the various sampling areas. The most abundant fish populations were found above the mouth of Twenty-Four Mile Creek. The catch

rate in this section was 11 fish per 100 foot in the Coyote Gulch section, and seven fish per 100 foot in the Clear Creek area. The fish populations appear to increase progressively as the flow increases downstream from the mouth of Crow Creek.

In 1970, water quality collections were made above and below the influence of the recent development of an antimony concentrator and tailing ponds at the mouth of Cox Creek. Base line data were collected monthly for a year to set water quality standards for Prospect Creek.

Prospect Creek is low in chemical fertility with total dissolved solids ranging from 12 to 57 ppm. pH ranged from 6.4 to 8.2. Only trace amounts of the heavy metal concentrations (copper, nickel, zinc, and cadmium) were present. Because of its low dissolved solid concentration, Prospect Creek has a low buffering effect. Thus, any slight chemical influence could result in marked change in water quality.

8. Highway Facilities

In the past, the Prospect Creek drainage has been served by a system of county and U. S. Forest Service roads. This system provided the necessary access for mining, timber harvesting, and recreational uses. These roads are, however, narrow and poorly maintained with little or no surfacing and inadequate provisions for dissipation of storm runoff.

The old bridges on this route create maintenance problems. Most of them are not adequate to carry present day traffic. New structures should be constructed in the near future to serve the safety and economic needs in this area.

9. Utility Systems

These projects will interfere with some of the utilities now in place along the existing roadway. The conflicting utilities will be relocated and perpetuated through the projects. The utilities in conflict will include power lines and a petroleum pipe line. The exact extent of involvement with these facilities has not been determined at this time. There may be some short-term disruption to the systems while they are being relocated; however, there will not be any long-term effects.

III. PROBABLE IMPACT OF THE PROPOSED PROJECTS

A. Broad Impacts

In light of the fact that these projects involve the reconstruction of the existing roadway and generally follow the same alignment, the broad impacts upon the area are not expected to be of much consequence.

We do not expect these projects to cause any more urbanization of the area than would have resulted if the projects were not built.

The projects will not result in the relocation of any residences or businesses. There are no permanent residences on the projects, so there are no mail routes, school bus routes, or irrigation systems involved.

There are no Section 4(f) lands involved in these projects. A historical site of local interest, the Old Mountain House, is located north of Station 305 \pm on Project S-221 (3). Exhibit "B" shows the location of the Old Mountain House with respect to the highway project.

This site is not listed in the National Register of Historic Places (see Section X). It has historic interest to the local people because it was a stage stop or rest stop for travelers during the development of western Montana and eastern Idaho. Any structures that may have existed at the site are now gone.

The project will have little, if any, effect on this site. The

new highway centerline will be farther from the site than the centerline of the existing roadway. An unimproved campground has developed adjacent to this site. The U. S. Forest Service has no present plans to develop this area for more intensive recreation use.

B. Impacts on the Narrow Band Adjacent to the Project

This project will have an effect on the area immediately adjacent to the roadway, both during and after construction.

The process of constructing a highway results in a temporary increase in air and water pollution. Contractors will be required to meet state air pollution standards with regard to dust control and air pollution control in order to keep air pollution to a minimum. Temporary and permanent erosion control methods and topsoil replacement and seeding will be employed.

The State of Montana, Department of Highways' Standard Specifications, Supplemental Specifications and Special Provisions provide specific instructions that the contractor must follow in meeting pollution control requirements.

Prior to the start of construction, the contractor is required to submit his schedules and methods of accomplishing temporary and permanent erosion control work for clearing and grubbing, grading, bridges, and other structures at water courses, construction, paving, haul roads, borrow areas, and his plan for disposal of waste materials.

The contractor shall provide immediate erosion control measures to prevent contamination of adjacent streams or other water courses, lakes, ponds, or other areas of water impoundment. Such work may involve the construction of permanent or temporary berms, dikes, dams, sediment basins, slope drains, and/or use of mulches, mats, seeding, or other control devices or methods necessary to control erosion.

Noise levels during and after construction will be higher than at present, although logging activity in the past represented noise levels of a similar magnitude.

IV. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

A minimal amount of air and water pollution will occur during and for a short period of time after construction.

The commitment of right-of-way for the road will remove this land from its present use and will preclude its being used for other purposes as long as the roadway exists.

Noise levels will be higher than at present. However, taking into account the lack of permanent residences in the area and the design year average daily traffic, this improvement will not approach the design noise levels of PPM 90-2.

Calculations have been made to evaluate the noise levels of the existing and proposed roadways at the site of the unimproved U. S. Forest Service park and picnic area. This site is at Station 296 \pm on the S-221 (3) project and has been used for the control since the projects are in a undeveloped area.

It can be seen from the calculations on the following pages that the noise levels that would be generated are well within the maximum allowable according to PPM 90-2, Noise Standards.

Following the noise calculations are copies of Table 1 and Section 5.a.(5) and (6) of PPM 90-2 which show the land use categories and the allowable noise levels.

As shown by the calculations and the requirements of PPM 90-2, the noise level on these projects will be far below the maximum allowable.

logon prece
THANK YOU. DATE 73.036
READY edit cl(hwn) ipli
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ENTER NRE
? 1

TIME 09.22.45

FIRST RUN

Future Road - Paved Surface

ENTER N
? 1
ENTER ADT, PDT, TMX, ST, SA, HD, DN, RL, BL AND FLO
? 130 20 15.1 30 45 0 200 1 0 1
ENTER P, DL3, DL5 AND DL7
? 2 2 0 0
YOU ARE NOW IN THE TWILIGHT ZONE, OFF THE LOW END OF THE
L10 - L50 CURVE FOR TRUCKS. ALL VEHICLES ARE NOW ASSUMED
TO BE CARS RESULTING IN LOW L50 AND L10 VALUES.
ARGUMENT TOO SMALL

L50 LEVEL = 28.56 DB L10 LEVEL = 39.43 DB
L10 - L50 = 10.87 DB

ENTER PCN (PCN = -1 OR 1)

? -1
EDIT run
ENTER NRE
? 1

SECOND RUN

Future Road - Gravel Surface

ENTER N
? 1
ENTER ADT, PDT, TMX, ST, SA, HD, DN, RL, BL AND FLO
? 91 20 15.1 30 45 0 200 1 0 1
ENTER P, DL3, DL5 AND DL7
? 2 2 +5 0
YOU ARE NOW IN THE TWILIGHT ZONE, OFF THE LOW END OF THE
L10 - L50 CURVE FOR TRUCKS. ALL VEHICLES ARE NOW ASSUMED
TO BE CARS RESULTING IN LOW L50 AND L10 VALUES.
ARGUMENT TOO SMALL

L50 LEVEL = 30.46 DB L10 LEVEL = 41.33 DB
L10 - L50 = 10.87 DB - 20 -

ENTER PCN (PCN = -1 OR 1)

? -1

EDIT run

ENTER NRE

? 1

ENTER N

? 1

ENTER ADT, PDT, TMX, ST, SA, HD, DN, RL, BL AND FLO

? 52 20 15.1 20 30 0 50 1 0 1

ENTER P, DL3, DL5 AND DL7

? 2 2 +5 0

YOU ARE NOW IN THE TWILIGHT ZONE, OFF THE LOW END OF THE
L10 - L50 CURVE FOR TRUCKS. ALL VEHICLES ARE NOW ASSUMED
TO BE CARS RESULTING IN LOW L50 AND L10 VALUES.

ARGUMENT TOO SMALL

THIRD RUN

Present Roadway

L50 LEVEL = 31.97 DB L10 LEVEL = 42.84 DB
L10 - L50 = 10.87 DB

ENTER PCN (PCN = -1 OR 1)

? -1

EDIT end

READY logoff

LOGGED OFF AT 09.35.54 73.036

#SESSION DURATION 00.13.09 CPU TIME USED 3315/300THS SEC.

TABLE 1

DESIGN NOISE LEVEL/LAND USE RELATIONSHIPS

<u>Land Use Category</u>	<u>Design Noise Level - L₁₀</u>	<u>Description of Land Use Category</u>
A	60 dBA (Exterior)	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70 dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	75 dBA (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	--	For requirements on undeveloped lands see paragraphs 5.a.(5) and (6) of PPM 90-2.
E*	55 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

* See paragraph 1.c. of this attachment for method of application.

(e) Based upon the noise impacts determined in (d) above, evaluate alternative noise abatement measures for reducing or eliminating the noise impact for developed lands.

(f) Identify those situations where it appears that an exception to the standards will be needed. Prepare recommendations to be included in the traffic noise report. (This report may be a portion of the location and design study reports or it may be a separate report).

(3) Location Phase and Environmental Impact Statement Requirements

To the extent this PPM is applicable to the location phase of projects under paragraph 4, the noise report shall describe the noise problems which may be created and the plans for dealing with such problems for each alternative under detailed study. The level of detail of the noise analysis in the location phase should be consistent with the level of detail in which the location study itself is made. This information including a preliminary discussion of exceptions anticipated, shall be set forth in the location study report and summarized in the environmental impact statement (if one is prepared) and, as appropriate, at the location hearing (for location hearings after December 31, 1972). Studies and reports for highway locations approved before December 31, 1972, need not include an analysis and report on noise. In such instances, the noise analysis and report will be required only for the design approval.

(4) Design Phase Requirements

The noise analysis prepared for the location phase is to be updated and expanded using the refined alignment and design information developed during the design studies. The report on traffic noise will include a detailed analysis of the anticipated noise impact, alternative or proposed abatement measures, discussion of coordination with local officials, and recommended exceptions.

5. a. (5) Coordination with Local Officials on Undeveloped Lands

Highway agencies have the responsibility for taking measures that are prudent and feasible to assure that the location and design of highways are compatible with existing land use. Local governments, on the other hand, have responsibility for land development control and zoning. Highway agencies can be of considerable assistance to local officials in these efforts with a view toward promoting compatibility between land development and highways. Therefore,

for undeveloped lands (or properties) highway agencies shall cooperate with local officials by furnishing approximate generalized future noise levels for various distances from the highway improvement, and shall make available information that may be useful to local communities to protect future land development from becoming incompatible with anticipated highway noise levels.

(6) Noise Abatement Measures for Lands Which are Undeveloped at Time of Location Approval

(a) Noise abatement measures are not required for lands which are undeveloped at the time of location approval; however, the highway agency may incorporate noise abatement measures for such undeveloped lands in the project design (if approved by FHWA) when a case can be made for doing so based on consideration of anticipated future land use, future need, expected long term benefits, and the difficulty and increased cost of later incorporating abatement measures.

(b) For land uses or activities which develop after location approval, noise abatement measures should be considered for incorporation in the project in the following situations:

(1) It can be demonstrated that all practicable and prudent planning and design were exercised by the local government and the developer of the property to make the activity compatible with the predicted noise levels which were furnished to the local government, especially when a considerable amount of time has elapsed between location approval and highway construction thus limiting local government's ability to maintain control over adjoining land uses, and

(2) The benefits to be derived from the use of highway funds to provide noise abatement measures is determined to outweigh the overall costs, and

(3) The noise abatement measures can be provided within the highway's proposed right-of-way or wider rights-of-way or easements acquired for that purpose.

(c) There are some situations where the design noise levels should be applied to lands which are undeveloped at the time of location approval. Some of these instances occur where the development of new land uses or activities is planned at the same time as the highway location studies. Other

instances occur where planning for the new development has preceded the highway location studies but the development has been delayed. These types of situations should be treated as though the land use or activity were in existence at the time of location approval provided:

- (1) The State highway agency is apprised of such prior planning.
- (2) The construction of the new land use or activity is started prior to highway construction or there is good reason to believe that it will start before highway construction.

(7) Incorporation of Noise Abatement Measures in Plans and Specifications

For those projects to which the standards apply, the plans and specifications for the highway section shall incorporate noise abatement measures to attain the design noise levels in the standards, except where an exception has been granted.

(8) Requests for Exceptions

Requirements and supporting materials for requests for exceptions to the noise standards are described in Paragraph 2 of Attachment 2 to this PPM. To the extent possible, consistent with the level of detail of the location study, identifiable exceptions should be reported in the location study report. The request for location approval shall contain or be accomplished by a request for approval of exceptions that have been identified in the location stage. Supporting material may be contained in the location study report. Subsequent requests for review and approval of additional exceptions, if any, will be similarly processed in conjunction with design approval.

b. Federal Participation

(1) Shifts in alignment and grade are design measures which can be used to reduce noise impacts. The following noise abatement measures may also be incorporated in a project to reduce highway-generated noise impacts. The costs of such measures may be included in project costs.

(a) The acquisition of property rights (either in fee or a lesser interest) for providing buffer zones or for installation or construction of noise abatement barriers or

V. ALTERNATIVES

A. Location Criteria

As has been indicated in the "Project History and Current Status" section of this statement, program approval was granted in December, 1962, for S-221 (3), and November, 1969, for S-221 (7), and we are currently in the design phase of the project development.

In determining the most suitable location for these projects, the following items are being considered.

1. Horizontal Curvature

The horizontal alignment in mountainous terrain such as is encountered on these projects needs to be one which follows, as nearly possible, the contour of the existing terrain. For this reason, the design standards for the projects allow for horizontal curves of $12^{\circ}30'$. Because the limitations of the terrain are not so severe that a maximum degree of curve is necessary, these projects will have a maximum of $10^{\circ}00'$ on S-221 (3) and $7^{\circ}30'$ on S-221 (7). The curvature of the roadway will be designed so that the impact on the environment is kept to a minimum.

2. Grades

Winter travel in this area will involve snow packed and icy roads for much of the season. Steep grades increase the hazards associated with slick roads. The design standards provide for grades up to 7%. However, at this stage of development, the maximum grade on the S-221 (3) project will be 6.2% and on the S-221 (7) project, it will be 3.9%. Grades will be held to a minimum compatible with the terrain.

3. Existing Roadway

The existing road has introduced several small roadway scars in the area. Where possible, the new roadway will follow the old road to keep cut and fill scars to a minimum.

4. Landslides

As pointed out earlier in the discussion of the geology of the area, there are existing landslides and potential landslide conditions along the route. Studies have been made of areas where slides have occurred or are likely to occur. The alignment will avoid these areas where possible or special design features will be incorporated into the plans to preclude their becoming major problems.

B. Description of Alternates

For the most of the route, it is possible to establish a location which meets the desired design criteria. The location follows the existing roadway except where alignment and grade dictates otherwise.

A study of alternate alignments (see Exhibit "C") has been required between Station 151+00 \pm and Station 175+00 \pm on Project S-221 (3), because of the close proximity of Prospect Creek and slopes containing talus slide areas. Consideration is being given to three alternate locations as follows:

1. Using the originally proposed design (Exhibit "C1") which would require encroachment of the roadway slope into Prospect Creek and make it necessary to develop channel changes. These channel changes would be from Station 159+00 \pm to Station 162+00 \pm and Station 164+00 \pm to Station 169+00 \pm . It may also be necessary to move the Yellowstone pipeline from Station 165+00 \pm to Station 168+00 \pm .

2. Realignment of the roadway (Exhibit "C2") in this area through the use of structures or structural steel pipe or a combination of these to cross the creek twice and avoid the encroachment on the creek. Here again, it will be necessary to move the Yellowstone pipeline. It should be noted that in Section IX, Exhibit C, the Exhibit C2 - Realignment Across Creek, shows only the crossings using pipes and that if bridges were used in the place of pipes, they would be at the same location.
3. Use the original alignment or an alignment closely paralleling the original alignment but with some type of retaining wall system to prevent encroachment into the stream and stabilize the talus slope in the cut sections. It may be necessary in this case to install retaining walls above or below or both above and below the shoulder of the roadway. The selection of one of the three alternates must take into account the need to minimize the detrimental impacts along with the economic considerations.

C. The "Do-Nothing" Alternate

The "do-nothing" alternate has been considered, but should not be recommended for it would not fulfill the basic responsibility of providing safer and more efficient transportation for the traveling public.

VI. COST ESTIMATES FOR ALTERNATE STUDY AREA

In the development of the cost estimates for the alternate alignments studies, several control conditions were established so that all alignments could be compared directly with one another. This, therefore, allows the exclusion of the remaining part of the project which would have a constant cost no matter which of the alternates in the study area is used.

The controls on the study area are the following:

1. The beginning and ending stations for the study area are the same on all alternates.
2. The following items were included in all alternate studies:
 - a. Excavation and Borrow
 - b. Haul
 - c. Surfacing
 - d. Guardrail
 - e. Small Drainage
 - f. Relocation of Yellowstone pipeline

The following items were used only in the alternate being studied:

C1 - Channel Change, included channel change excavation and riprap.

C2 - Realignment across creek, included in this study was the use of one of the following means by which to cross the creek:

- a. Structural Plate Pipes (full circle)
- b. Structural Plate Pipes (natural bottom)
- c. Bridges

C3 - Alignment with retaining wall system - included the use of a bin wall to restrict the width of the roadway slope to prevent encroachment into Prospect Creek.

The estimates for the studied alternative in the conflict area are as follows:

COST ESTIMATES FOR
ALTERNATE ALIGNMENTS IN
STUDY AREA

ALTERNATE ALIGNMENT	LENGTH IN MILES	SPECIAL CONSIDERATION	ESTIMATED COST OF PIPELINE RELOCATION	ESTIMATED COST OF STUDY ALTERNATE	TOTAL ESTIMATED COST OF ALTERNATE
C1 - Original Alignment	0.774	Channel Change	\$39,000	\$142,600	\$181,600
C2 - Realignment Across Creek	0.792	Structural Plate Pipe	\$48,600	\$147,900	\$196,500
		Structural Plate Pipe With Nat- ural Bottom	—	—	—
C3 - Alignment With Retaining Wall System	0.774	Structures	\$48,600	\$246,800	\$295,400
		Retaining Wall	\$39,000	\$164,600	\$203,600

VII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF
MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT
OF LONG-TERM PRODUCTIVITY

The construction phase of this project will probably extend through two construction seasons, although work may not be in progress all this time as most of the construction work will be shut down during the winter months. On a calendar day basis, it will probably take about one year. During the construction period, the surrounding area will undergo a short time of general disruption due to the construction process. There will be an increase in noise and air pollution, the construction limits will be cleared, and detours will probably be necessary to route traffic around construction areas. However, upon completion of the project, the area will return to normal and adjust to the changes that have taken place. Therefore, the short-term uses will have little lasting effect on the environment.

In regard to the long-term productivity of the area, the small amount of adverse effects from the short-term use of the environment is certainly justified as this project will provide a fast, safe, and efficient transportation facility for the traveling public. We do not foresee any major change in land use as a result of this project nor do we anticipate any significant adverse environment effects.

VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The land acquired for right-of-way will no longer be available for other use. This acreage, however, is not of sufficient quantity to be significant. Also, the gravel used in the roadway surfacing will be irretrievable, but here again the quantities involved are not significant.

There does not appear to be any major irreversible commitment of resources that would affect the beneficial uses of the environment in the area.

IX. EXHIBITS

EXHIBIT "A"

LOCATION MAPS

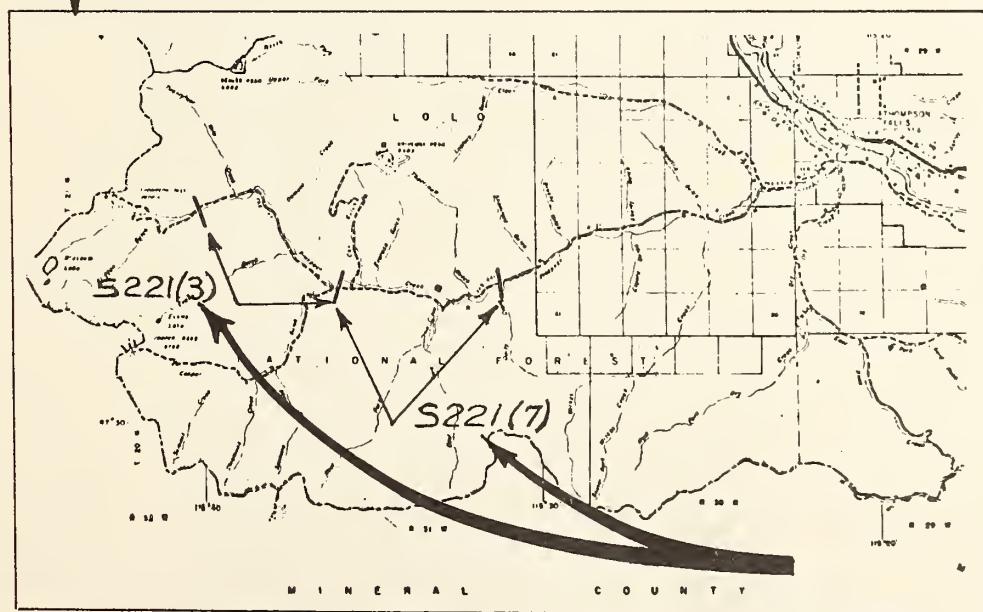
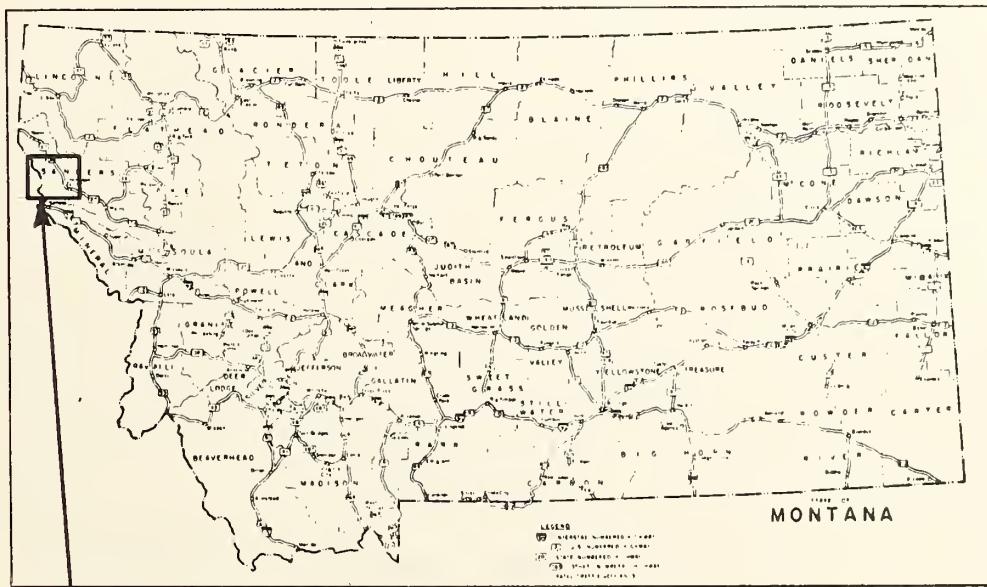
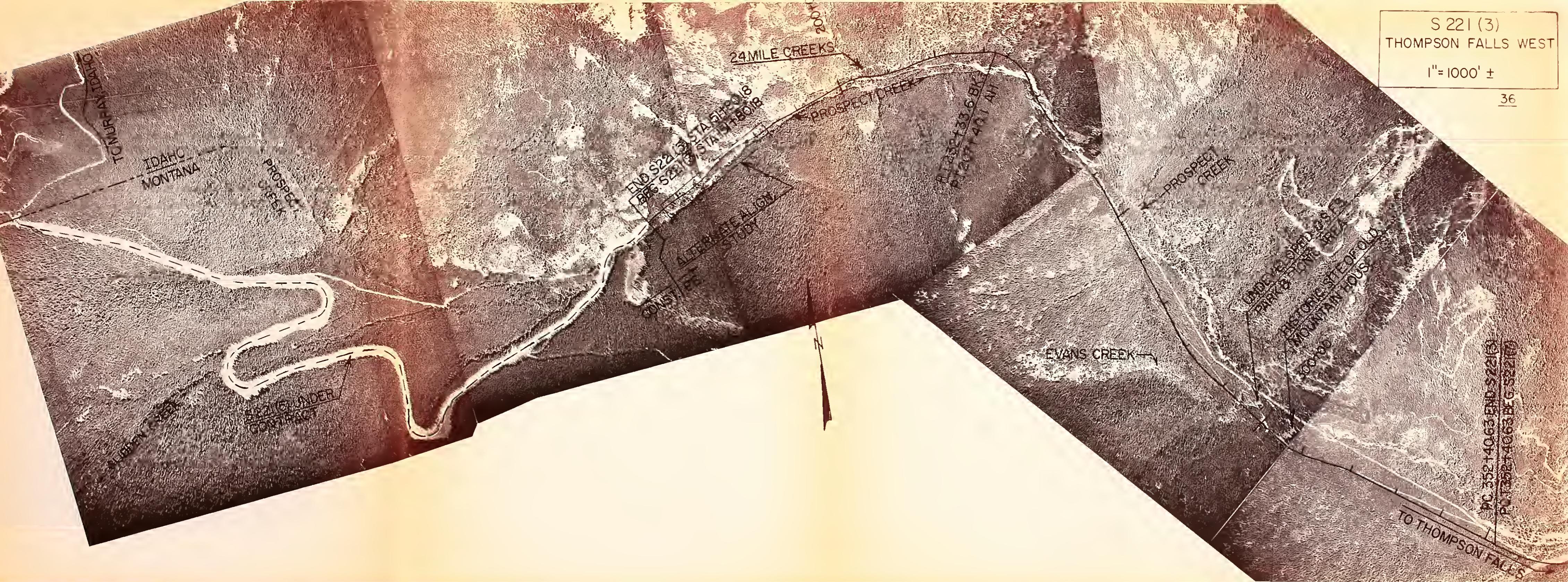


EXHIBIT "B"

PROJECT MAPS

S 21(3)
THOMPSON FALLS WEST
1" = 1000'

36



S 221(7)
THOMPSON FALLS, WEST
1000' ±

37



S221(3)

THOMPSON FALLS WEST
ALIGN. STUDY AREA

ALT. C1

ALT. C2

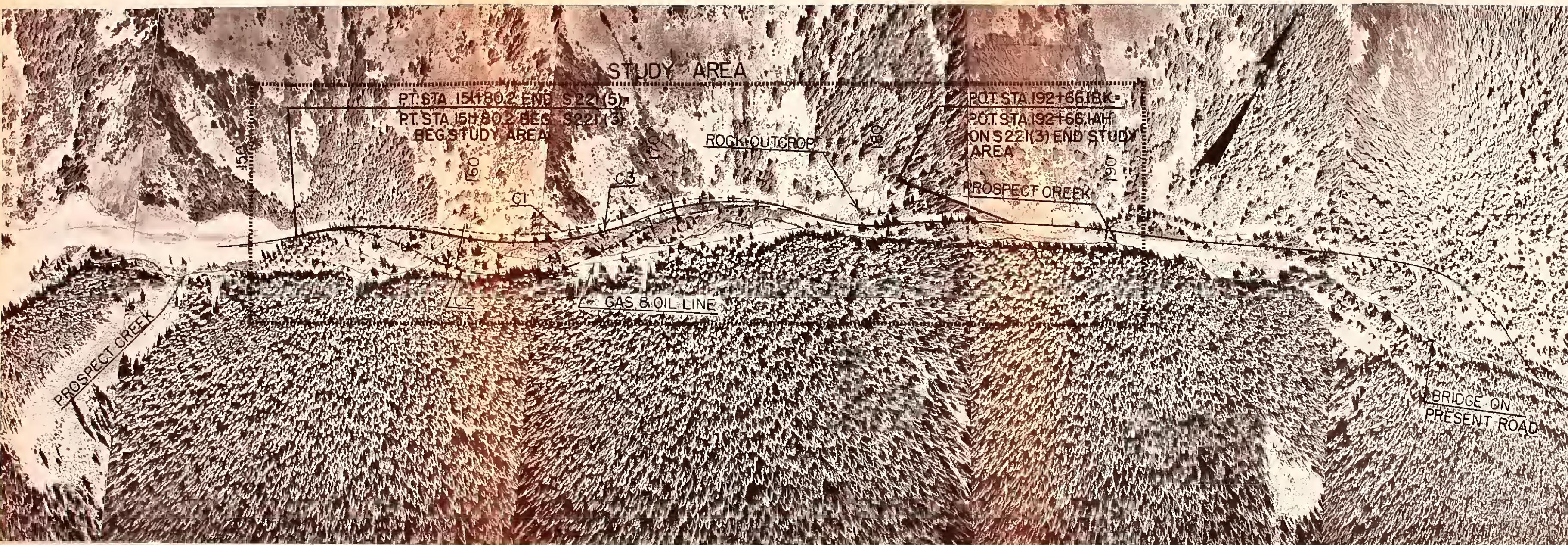
ALT. C3

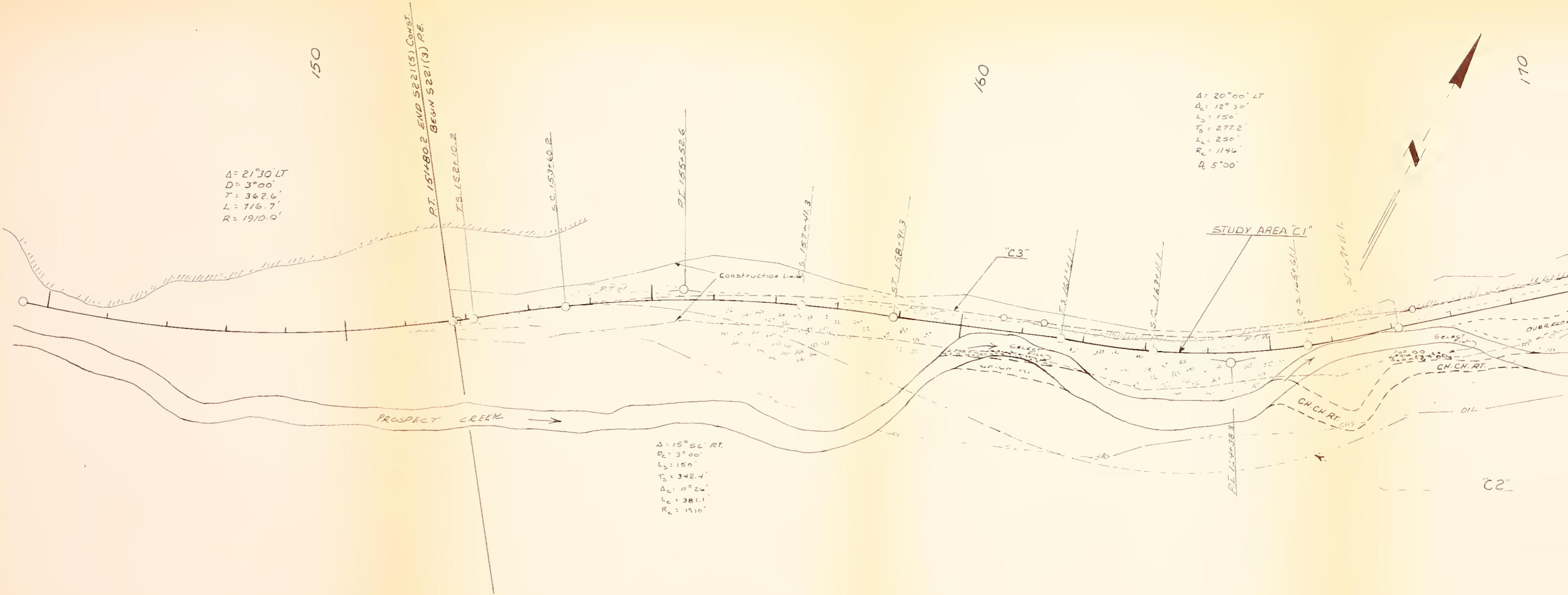
GAS & OIL LINE

CREEK

SCALE 1" = 250' ±

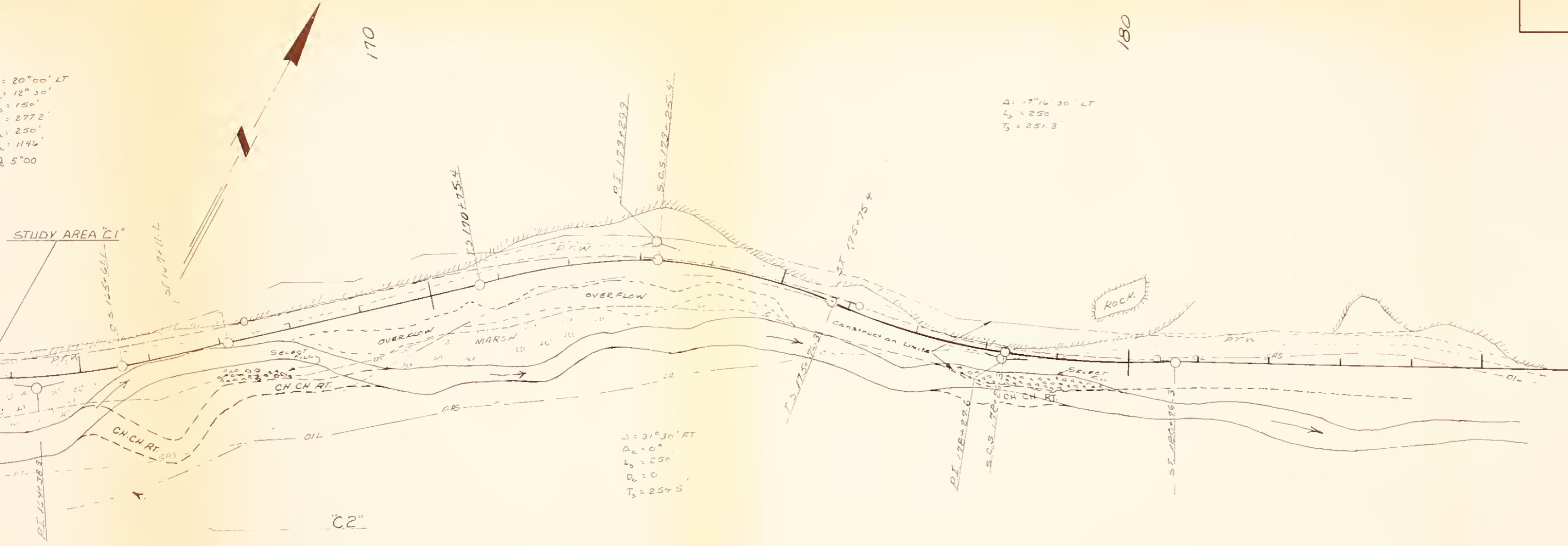
38



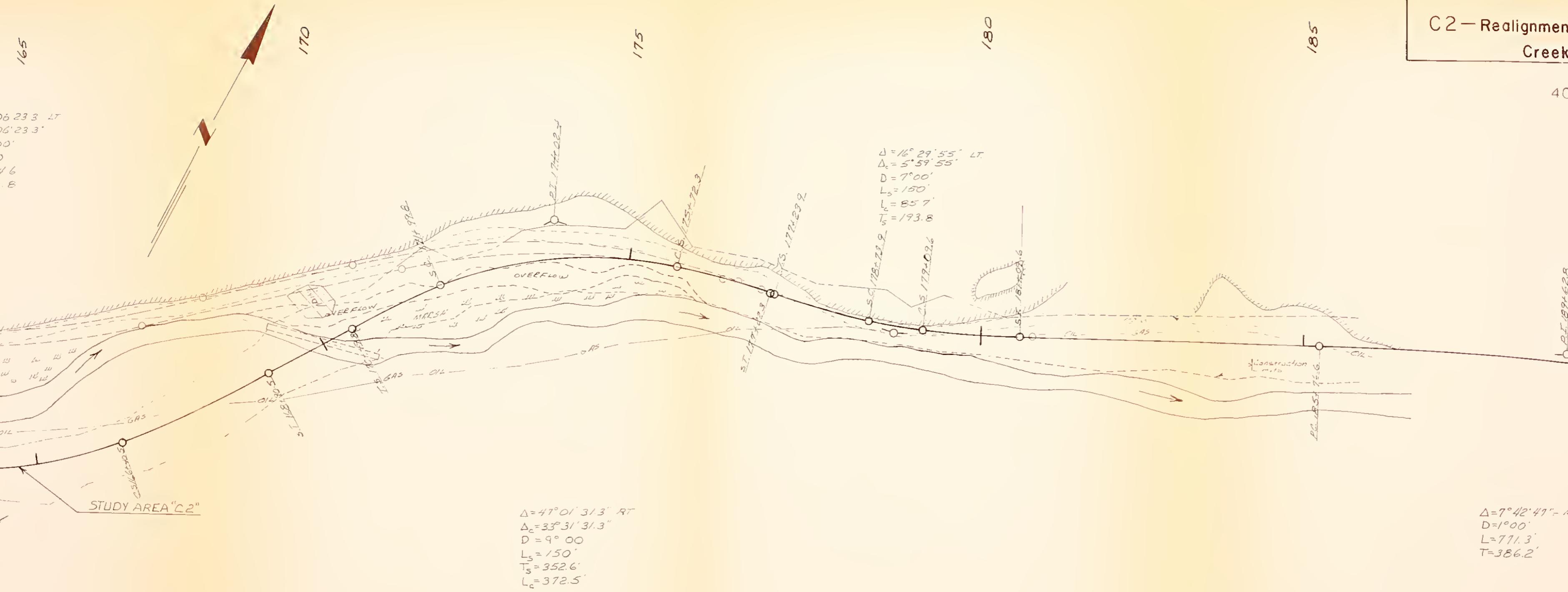


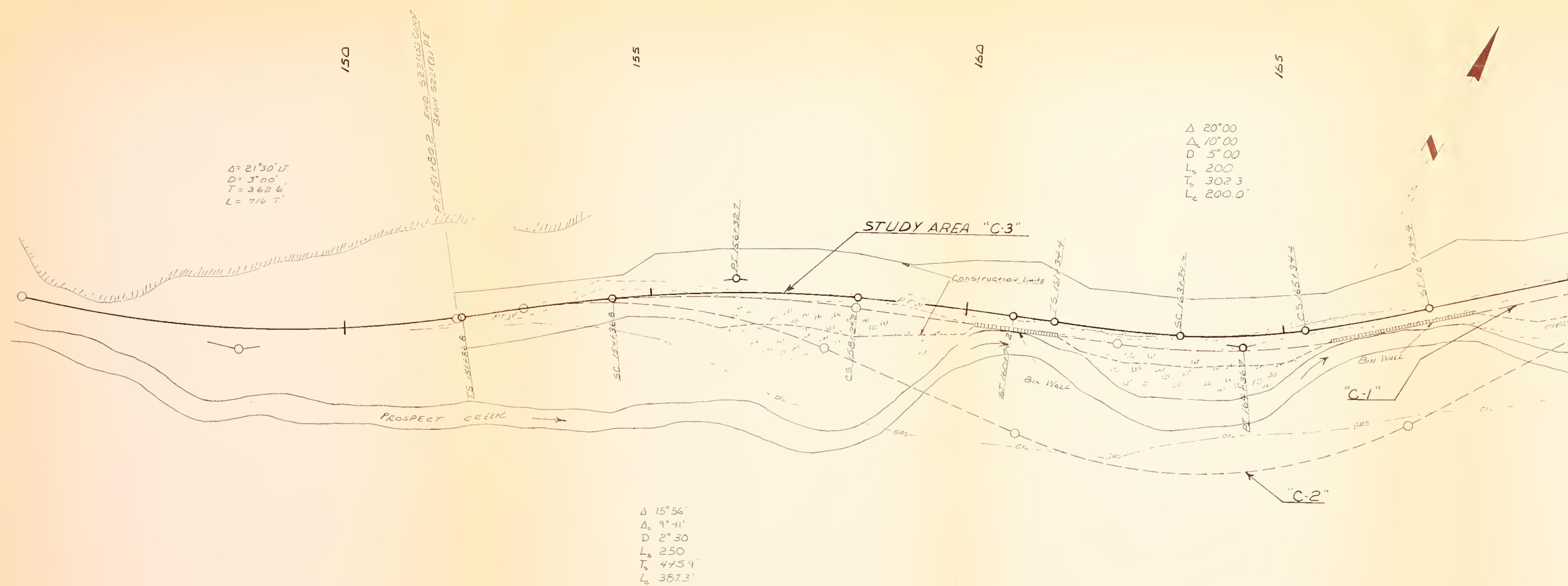
CI - Original Alignment With
Channel Changes

39



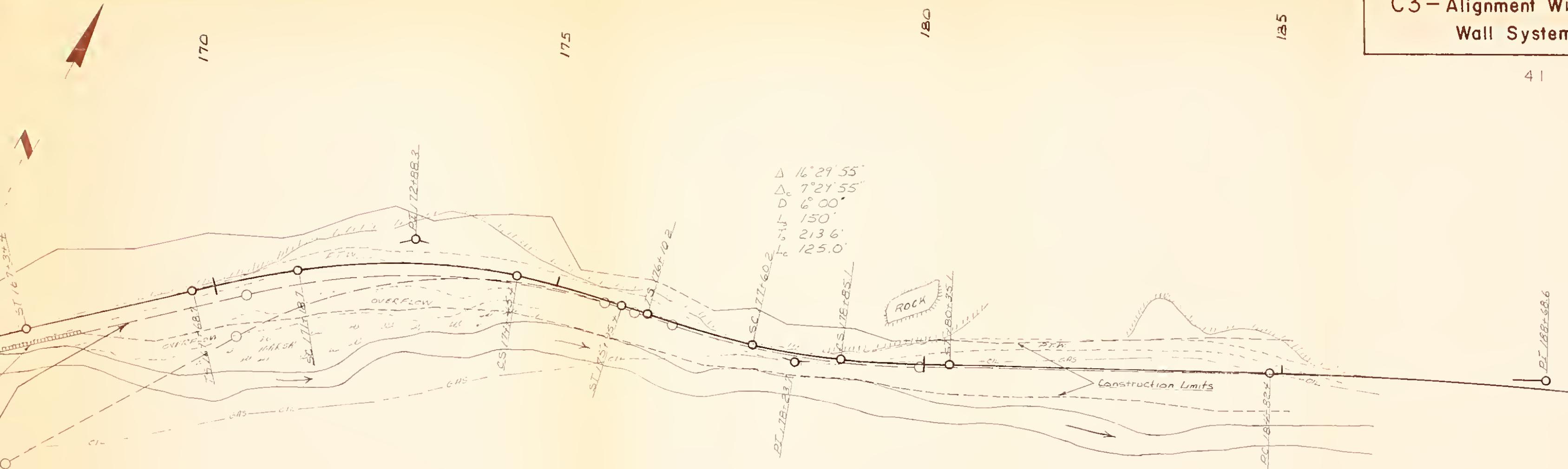
C 2 - Realignment Across Creek





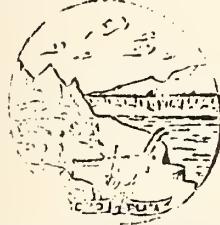
C3 – Alignment With Retaining Wall System

1



30° 59' 08"
21° 14' 08"
6° 30'
150
319 6'
326 7'

X. SECTION 4(f) LANDS DETERMINATION



STATE OF MONTANA

DEPARTMENT OF HIGHWAYS

HELENA, MONTANA 59601

JOHN A. TISON
DIRECTOR HIGHWAYS

September 21, 1972

32-GOP

S-221(3)
Thompson Falls -
West

Mr. Ray Franks
District Ranger
Lolo National Forest
Thompson Falls, Montana 59873

Dear Mr. Franks:

As per our conversation at the September 19, 1972 meeting on the subject project, your assistance is requested in providing information and expertise for the development of the Environmental Impact Statement for the subject project.

We are looking for existing information that you may have. Information in the following list of areas will be greatly appreciated:

- History of the area and history of the project
- Land use of the area
- Geology of the area
- Climate of the area
- Population of the area
- Economic activity
- Fish and wildlife
- Flora and fauna

We will also appreciate your comments on alternatives, environmental impacts and probable adverse environmental effects which cannot be avoided.

Also, the Department of Transportation has recently indicated that a section 4(f) submission will be required on projects which take right-of-way from national forest lands, unless the U.S. Forest

GEORGE VUCANOVICH, CHAIRMAN
HELENA

(Cont'd)

September 21, 1972

Page Two

Service renders a supportable determination that the specific tracts do not have present or planned 4(f) usage.

Since this project will be taking right-of-way from the Lolo National Forest, we will appreciate your furnishing us some sort of determination as to whether you have any present or planned 4(f) usage for the specific areas that will be involved with this project.

We are enclosing copies of a draft and a final Environmental Impact Statement, which you requested.

Your assistance in this effort is greatly appreciated.

Very truly yours,

H.J. ANDERSON
DIRECTOR OF HIGHWAYS

BY Grover O. Powers
Grover O. Powers, P.E.,
Supervisor - Preconstruction
Section

32-GOP:SCK:KFS:CASE:jj
Enclosures

cc: J.R. Beckert
B/C. Miller
S.C. Kologi
J. Large - Lolo National Forest-Missoula
Fred Burnell - Region #1-U.S.F.S.-Missoula

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
LOLO NATIONAL FOREST

Thompson Falls Ranger District

7750

RE: S-221(3)
Thompson Falls West

Box 578
Thompson Falls, Mt.
November 29, 1972

Mr. Grover O. Powers
Supervisor - Preconstruction
State of Montana, Department of Highways
Helena, Montana 59601

Dear Mr. Powers:

The following statement is response to Section 4(f) of the Department of Transportation Act of 1966 as amended by Federal Aid Highway Act of 1968:

The proposed Forest Highway #7, (S221(3) Thompson Falls West Route in the Prospect Creek Drainage of Sanders County, Montana, has been reviewed against the criteria of Section 4(f) of the Department of Transportation Act of 1966, PL 89-670, as amended by the Federal Aid Highway Act of 1968, PL 90-495, Section 18.

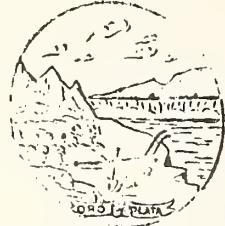
Since this route crosses an area of Public land under Lolo National Forest jurisdiction of these Public lands, we have determined that the route does not encroach on or use land from any of the types of specially designated areas in the above Public Laws.

Sincerely,

William Ray Franks
WILLIAM RAY FRANKS
District Ranger

cc: SO, files





FOR FURTHER INFORMATION
GOVERNOR

STATE OF MONTANA

DEPARTMENT OF HIGHWAYS

HELENA, MONTANA 59601

R. J. ANDERSON
DIRECTOR OF HIGHWAYS

September 21, 1972

32-GOP

A REPLY REFER TO:

S-221(3)
Thompson Falls -
West

Mr. Ralph Boland
Montana Fish and Game Department
Sam W. Mitchell Building
Helena, Montana 59601

Dear Mr. Boland:

This is to request information on fish and wildlife, as per our conversation at the September 19, 1972 meeting at Thompson Falls. Any data or comments on the Prospect Creek area will be appreciated.

Also, the Department of Transportation has recently indicated that for projects affecting fishing streams or game ranges, a statement rendering a supportable determination that the lands affected do not have present or planned 4(f) usage must be obtained from the Department of Fish and Game. This determination would relate to lands owned or planned to be acquired by the Department of Fish and Game for conducting their park, wildlife and recreational functions.

Since the project follows a fishing stream, we will appreciate your furnishing us with some sort of determination as to whether you have any present or planned 4(f) usage that will be affected by this project.

(Cont'd)

GEORGE VUCANOVICH, CHAIRMAN
HELENA

Wm. M. KESSNER, VICE CHAIRMAN
BLACK EAGLE

G. R. COONEY
BUTTE

P. L. BACHELLER
BILLINGS

JAY LALONE
SMITH

JOHN D. JONES, JR., AL RETARS
MISSOULA

Montana Statewide Citizens' Committee to Retain

Montana's Public Lands

September 21, 1972

Page Two

Your comments and expertise will be of great assistance in the preparation of our Environmental Impact Statement on the subject project.

Very truly yours,

H.J. ANDERSON
DIRECTOR OF HIGHWAYS

BY Grover O. Powers
Grover O. Powers, P.E.,
Supervisor - Preconstruction
Section

32-GOP:SCK:KFS:CAS:jj

cc: J.R. Beckert
B/C. Miller
S.C. Kologi

STATE OF MONTANA





A rectangular stamp with a decorative floral border. The text "MONTANA HIGHWAY COMMISSION" is at the top, "RECEIVED" is in the center, "NOV 27 1972" is below it, and "HELENA, MONTANA" is at the bottom.

Mr. H. J. Anderson
Director of Highways
Department of Highways
Helena, Montana 59601

Attention: Grover O. Powers

Gentlemen:

I believe the information concerning hunting and fishing in this particular area has been furnished by our regional office.

There is undoubtedly recreational 4(f) usage on this land; however, at this time we do not own any land involved in the project, nor do we have any immediate plans for acquisition of any of these properties.

Sincerely,

Wes Washington

Wesley R. Woodgerd, Administrator
Recreation and Parks Division

WRW/bd

cc: ~~Ralph Boland~~
~~Tom Hay~~ || ||

STATE OF MONTANA

DEPARTMENT OF HIGHWAYS

February 26, 1973

32-GOP

S 221 (3)

Thompson Falls - West
(Environmental Statement)

Mr. Ashley Roberts
Chief of Recreation and Parks Division
Department of Fish and Game
Sam W. Mitchell Building
Helena, Montana 59601

Dear Mr. Roberts:

This is to request information for the Environmental Impact Statement which is to be written on the subject project.

On the subject project at approximate station 305+, see attached print, there is a historic site of local significance which is known as "The Old Mountain House".

We are requesting any information that you may have as to whether this site is included in the Federal Register or if it is being considered for inclusion into the Federal Register as a historic site.

Any information which you can furnish this office will be greatly appreciated.

Very truly yours,

H. J. ANDERSON
DIRECTOR OF HIGHWAYS

BY *Grover O. Powers*
Grover O. Powers, P. E., Supervisor
Preconstruction Section

32-GOP:SCK:CAS:mg

Attachment

cc: J. R. Beckert
R. E. Champion
B. C. Miller
~~S. C. Kologi~~

Montana Department of Transportation

Montana Department of Transportation

Montana Highway Commission

RECEIVED

MAR - 8 1973

HELENA, MONTANA

MISSISSAUGA, ONTARIO

Helena, Montana
March 5, 1973

Re: S 221 (3)
Thompson Falls - West
(Environmental Statement)

Mr. H. J. Anderson
Director of Highways
Department of Highways
Helena, Montana 59601

Attention: Grover O. Powers

Dear Mr. Anderson:

This will be with reference to your inquiry concerning an historic site of local significance which is known as "The Old Mountain House".

We have checked this out and the site is not on the National Register. We have very little knowledge about the site. It is not on our state inventory and we are not considering it for inclusion on the National Register.

Sincerely,

Ashley C. Roberts

Ashley C. Roberts
Administrator
Recreation and Parks Division

ACR/bc

